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ABSTRACT

One in a series on southwestern states, this report deals with the underrepresentation of Hispanics and other racial and ethnic minorities in higher education and provides specific information concerning Arizona's population. Written for educational policy makers, the report focuses on the implications of the fact that the greatest population growth in the next 20 years will take place among minority populations, whose rates of postsecondary educational attainment and socioeconomic status have been historically low. Information is presented in graphic and narrative form for 10 specific areas related to population growth, educational attainment, and family income. Exhibit 1 is concerned with population growth from 1960 to 1980 and projections for 2000. Exhibits 2 and 3 look at population by racial and ethnic origin. Exhibits 4 and 5 examine the educational attainment of persons aged 25 and over and the persistence of White, Hispanic, Black, and American Indian high school students. Exhibits 6 and 7 illustrate the relationships among race and/or ethnicity, family income, and college attendance. Exhibit 8 displays the composition of postsecondary enrollments by race and ethnicity compared with each group's representation in the college-age population. Exhibits 9 and 10 show postsecondary degrees earned by race/ethnic group. (JHZ)

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Minorities in Higher Education:

The Changing Southwest

Arizona

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Minorities in Higher Education: The Changing Southwest

Arizona

A report prepared by the WICHE Information Clearinghouse in cooperation with the Western Regional Office of the College Board and with the support of the Atlantic Richfield Foundation

Geoffrey Dolman, Jr.
Norman S. Kaufman

Western Interstate Commission for Higher Education WICHE
The College Board

WICHE

WICHE, the Western Interstate Commission for Higher Education, is a nonprofit regional organization. It helps the thirteen member states to work together to provide high-quality, cost-effective programs to meet the education and manpower needs of the West. Member states are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. Through its Information Clearinghouse, WICHE provides information to assist higher education and governmental policy makers in the West.

This series of reports includes the following publications:

Minorities in Higher Education: The Changing Southwest (Arizona), publication no. 2A134a

Minorities in Higher Education: The Changing Southwest (California), publication no. 2A134b

Minorities in Higher Education: The Changing Southwest (Colorado), publication no. 2A134c

Minorities in Higher Education: The Changing Southwest (New Mexico), publication no. 2A134d

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Foreword

Sometimes we may become aware of societal trends without recognizing their potential effects on our social institutions. At other times, we may fail to respond adequately to social changes, even though we are aware that they are taking place. Among the virtues of our society are both the tendency toward self-correction--to make adjustments in our social institutions so that they function effectively--and the tendency toward making adjustments that anticipate needed changes and that, in a sense, preempt the need for self-correction.

As data in this and companion reports show, the current levels of education and income achieved by racial and ethnic minorities fall below that of Whites. This imbalance in economic and educational attainment, plus the rapid growth in the population of racial and ethnic minority groups, raises important issues for education and government policy makers in each state. It is the intent of this report to help focus the discussion on these issues and to encourage appropriate responses.

WICHE is grateful to the organizations and individuals who have worked with us on this important project. The College Board cosponsored the study and provided assistance and advice at several stages. The Atlantic Richfield Foundation provided additional financial support. A regional advisory committee, whose members are listed on the following page, provided valuable assistance in preparing these reports and helped develop a strategy for disseminating the results of the study.

December 1984

Phillip Sirotkin
Executive Director
Western Interstate Commission
for Higher Education

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Introduction

This series of state reports is intended to highlight the implications for educational planning of the changing demography of the Southwest. This project is the outgrowth of an earlier report, which was prepared to provide background data for a regional higher education conference on minority access and retention in higher education (Kaufman et al., 1983).

The decision to concentrate on minorities in higher education in the southwestern states follows from several conclusions that have been well documented.

- Certain racial and ethnic minorities have been underrepresented in higher education relative to nonminorities. This is especially true of Hispanic students, who are well represented, proportionally and numerically, in the population of these states.

- These minorities are even less well represented among college and professional school graduates.

- Increases in the proportion of racial and ethnic minorities among successive age cohorts present a challenge to educators and policy makers concerned with reversing these patterns of underrepresentation.

The reports focus on each of five southwestern states (Arizona, California, Colorado, New Mexico, and Texas) individually in order to call attention to the most important findings in each state.

As college-age populations in these five southwestern states grow in terms of both the numbers and percentages of ethnic minority individuals, policy makers will be faced with a number of serious educational and political questions. For example:

- Are current approaches to provision of educational opportunity--for all seeking it, regardless of ethnic background--sufficient, now and for the future?

- What are the implications for higher education and for institutions' program and resource "mix" of the growing minority share of the college-age population and the simultaneous decline (in some states) of the proportion of Whites in the same age groups?

- What are the implications of the growth of these minority populations for the economies of the states and their supplies of highly trained manpower, given the current distribution of minority students throughout the educational system (by institutional level and type, for example)?

- What are the implications for the higher education institutions of the current pattern of distribution of minority students, given the changes in the composition of the college-age group?

- If the educational patterns of minority students remain unchanged as their numbers grow, what are the possible social and political consequences?

These questions are meant only to suggest the seriousness and complexity of policy issues that need attention. The hope of the organizations publishing the report is that its contents will be useful as these challenging questions are addressed.

Definitions

The information in these reports comes primarily from two sources: the 1980 census of the population and related surveys by the United States Bureau of the Census provided population and demographic data, and the Higher Education General Information Survey (HEGIS) conducted by the National Center for Education Statistics (NCES) provided education data. Reference to these two sources ensures that there will be comparability in the data presented across states and that other users will have access to the same data sources.

Caution must be used when comparing the two data bases, however, because each source defines racial and ethnic groups differently, with particular impact on the "Hispanic" population group. The HEGIS format designates five racial or ethnic groups: American Indian, Black, Asian, Hispanic, and White. The Census Bureau uses the racial designations American Indian, Black, Asian, Other, and White, plus a further designation "Persons of Spanish Origin" and "Persons not of Spanish Origin," stating that persons of Spanish origin may be of any race. In this report, the Census Bureau data have been reconciled with the HEGIS data format, resulting in the following comparable groups:

HEGIS	CENSUS
American Indian	American Indians, Eskimos, and Aleuts whether of Spanish origin or not
Black	Blacks not of Spanish origin
Asian	Asian and Pacific Islanders whether of Spanish origin or not
Hispanic	Persons of Spanish origin, regardless of race
White	White, not of Spanish origin
Residual	Total population minus the above (also Other races not of Spanish origin)

While these breakdowns do not avoid all problems of comparability, they appear to work well for the purposes of this report. To keep the terminology short, in all cases Black and White refer to Black not-Hispanic and White not-Hispanic. Exhibits derived from census data refer to the category "Spanish origin," while exhibits derived from HEGIS data use the term "Hispanic" to identify essentially the same group.

It further must be recognized that the terms "Spanish origin" and "Hispanic" aggregate into one group several ethnic groups, e.g., Central American immigrants, Latinos, Mexican Americans, and others, which may vary from state to state. Each of these groups has its own demographic and cultural characteristics. Policy makers may wish to be aware of these different characteristics and of their implications for higher education.

The most recent and reliable data available were used in this report. In some cases more recent data were available, but older information was used because it was comparable with the data for earlier years whereas the newer data were not. Where the racial and ethnic composition of the college-age population is compared with the composition of the student population and the distribution of degrees among racial and ethnic groups (Exhibits 8A-8E and 9A-9E), HEGIS data from 1980 were used for the education information in order to compare them with census data from the same year.

Summary

- Arizona's population is projected to be between 4.1 million and 4.8 million by the year 2000, up from 2.7 million in 1980, a twenty-year growth rate of between 52 and 78 percent. (See Exhibit 1.)

- Nearly four-fifths of the population growth from 1970 to 1980 can be accounted for by in-migration, which is projected to remain high. (See narrative for Exhibit 1.)

- People of Spanish origin accounted for 16.2 percent of the total population of Arizona in 1980, but they accounted for nearly 26 percent of the 0-4 age group. (See Exhibits 2 and 3.)

- By 2000, one-third of the age 0-4 population is projected to be of Spanish origin. (See Exhibit 3.)

- Blacks represented 2.7 percent of the total population in 1980, American Indians 5.6 percent, Asians 0.8 percent, and all others 0.1 percent. The American Indian population shows growth patterns similar to that of the Spanish-origin population. (See Exhibits 2 and 3.)

- Arizona has the nineteenth highest proportion of people aged 25 and older with college degrees. Whites far exceed minority groups in postsecondary educational attainment. (See Exhibit 4.)

- Data suggest that Hispanics and American Indians tend to have higher high school dropout rates than Blacks or Whites. The Hispanic and American Indian enrollments in twelfth grade in fall 1982 were only 68 and 63 percent respectively as large as the Hispanic and American Indian enrollments in ninth grade three years earlier, compared with 85 percent for White and Black enrollments. (See Exhibit 5.)

- Nationwide figures show that 83 percent of Whites (adults and school-age respondents to census surveys during the period from 1974 to 1978) completed high school compared with 72 percent of Blacks and 55 percent of American Indians and Hispanics. (See narrative for Exhibit 5.)

- National data indicate that smaller percentages of students from low-income families enroll in postsecondary education than students from medium- and high-income families. In Arizona, relatively high percentages of Spanish-origin, Black, and American Indian families earned less than $15,000 in 1979. (See Exhibits 6 and 7.)

- Present enrollment and earned degree patterns show serious underrepresentation (relative to their proportions in the college-age population--aged 20-29) of some minority groups at all levels of postsecondary education. (See Exhibits 8A-8E and 9A-9E.)

- Patterns of degrees awarded to minorities between 1976-77 and 1980-81 are markedly different from the overall pattern in Arizona. Each minority group has a unique pattern. (See Exhibit 10.)

- In summary, the greatest population growth in the next twenty years will take place among the minority populations, whose rates of postsecondary educational attainment and socioeconomic status have been low historically.

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Exhibit 1
Population Growth, 1960 to 1980, and Three Projections, 1990 to 2000
—Arizona—

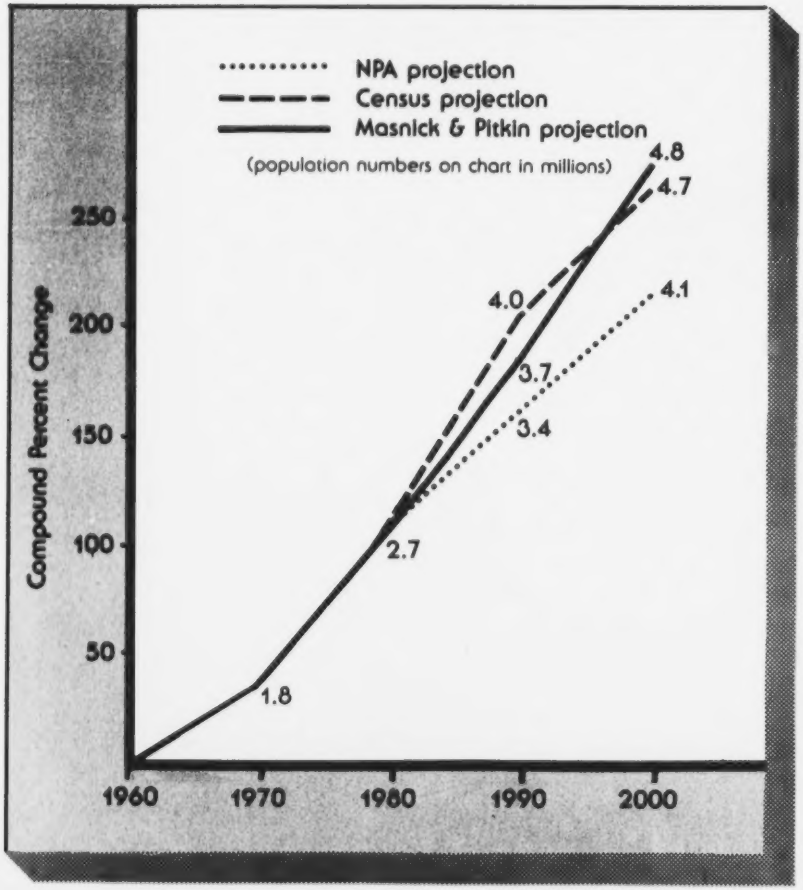
This exhibit shows the actual percentage growth in Arizona's population from 1960 to 1980. The dotted, dashed, and solid lines represent three different population projections for 1990 and 2000. These projections are based on mathematical calculations of trends evident today. They do not take into account economic or social factors that may cause the growth rate to accelerate or to slow.

- Arizona's population is projected to reach 4.1 million to 4.8 million by the year 2000, up from 2.7 million in 1980. The growth from 1980 to 1990 is estimated to be approximately 26 to 48 percent, and estimates of the overall change from 1980 to 2000 range from 52 to 78 percent.

- During the 1970s, Arizona was the second fastest growing state (proportionately) and added the fourth greatest number of inhabitants. The Bureau of the Census predicts that the state will be the third fastest growing state during the decade of the 1980s, and the National Planning Association predicts that Arizona will be the fastest growing state (Robey and Russell, 1983).

- Nearly four-fifths of the population growth from 1970 to 1980 can be attributed to in-migration (Masnick and Pitkin, 1982). Although many of the people migrating to Arizona are young adults, who have attained or are approaching those years in which they will be starting families, the state does have a significant in-migration of elderly persons.

Exhibit 1
Population Growth, 1960 to 1980, and Three Projections, 1990 to 2000
—Arizona—



Sources: Robey and Russell, 1983; U.S. Bureau of the Census, 1970 and 1980; Masnick and Pitkin, 1982

Note: The Masnick and Pitkin projections are plotted as found in their report. Projections for 2000 from the National Planning Association and the Bureau of the Census are estimates calculated by regression analysis using actual population figures from the 1960, 1970, and 1980 censuses and the 1990 projections.

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Exhibit 2
Population by Race and Spanish Origin, 1980
—Arizona—

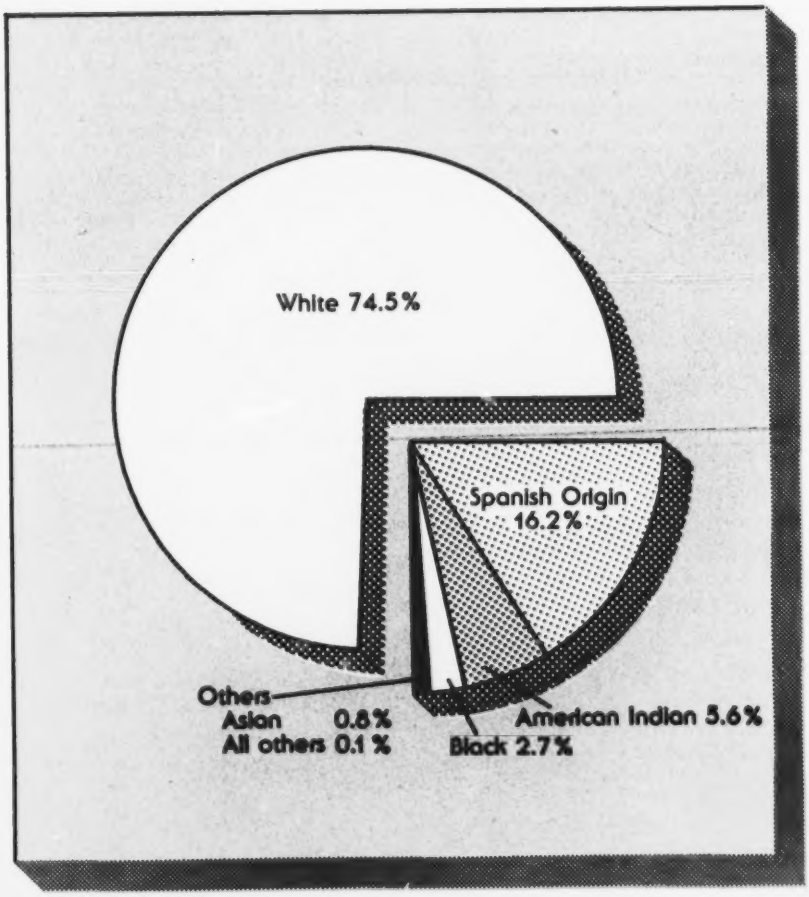
Exhibit 2 presents the proportions of racial and ethnic groups in the 1980 population in Arizona. Since the data collected on race and Spanish origin in 1970 and 1980 are not comparable, it is not possible to make an accurate comparison between the two censuses.

- Arizona's largest minority group is the Spanish-origin population, 16.2 of the state's population. This is the fourth highest percentage of people of Spanish origin in the United States, and the 440,701 Spanish-origin inhabitants constitute the eighth largest Spanish-origin population in the nation (American Demographics, 1983).

- Phoenix had the thirteenth largest metropolitan Spanish-origin population in the country in 1980, nearly 200,000. Tucson ranked twenty-sixth with more than 111,000. In percentage of Spanish-origin population, Tucson ranked twenty-sixth with 21 percent and Phoenix thirty-eighth with 13.2 percent (American Demographics, 1983).

- Blacks constitute 2.7 percent of Arizona's population, American Indians 5.6 percent, Asians 0.8 percent, all others 0.1 percent. Arizona's American Indian population is the third largest in the United States with more than 152,000 and is the second largest in proportion (Kaufman et al., 1983).

Exhibit 2
Population by Race and Spanish Origin, 1980
—Arizona—



Source: Kaufman et al., 1983, Table 21 and 23

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Exhibit 3
School and College-Age Population by Race and Spanish Origin, 1980 (Actual) and 2000 (Projected)
—Arizona—

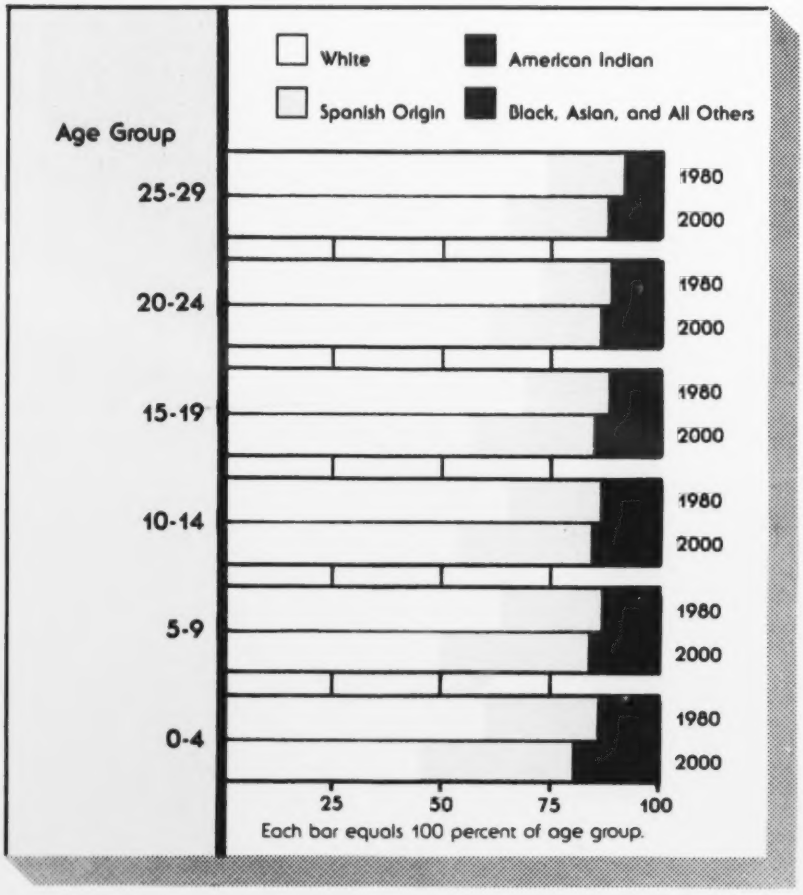
This exhibit shows the distribution of people of school age by race and Spanish origin for 1980 and a projection for the year 2000. The projection is based on a regression analysis of age cohorts from the 1980 census. Because the percentages of Blacks and Asians in Arizona are so small, they have been included in the All Others category in Exhibit 3. Blacks constitute between 3.0 and 3.4 percent of the population groups aged 0-29, and Asians constitute 0.8 to 1.1 percent of the same groups. The projections do not show any trends toward substantial increases among these racial groups between 1980 and 2000.

- Exhibit 3 shows that the Spanish-origin population tends to be highly concentrated in the younger age groups. Although people of Spanish origin constituted 16.2 percent of the total population of Arizona in 1980, they accounted for 25.6, 24, and 21.8 percent respectively of the three youngest age groups (ages 0-4, 5-9, and 10-14).

- By the year 2000, children of Spanish origin are projected to account for 33.2, 31.3, and 29.4 percent respectively of the three youngest age groups.

- While the numbers of Black, Asian, and American Indian children will not be as large as the Spanish-origin group, the percentages of racial minority children in the youngest age groups are expected to rise steadily. By the year 2000, it is estimated that approximately 13.2 percent of the children below age 15 in Arizona will be American Indians.

Exhibit 3
School and College-Age Population by Race and Spanish Origin, 1980 (Actual) and 2000 (Projected)
—Arizona—



Source: Kaufman et al., 1983, Tables 20 and 22

Note: Blacks constitute between 3.0 and 3.3 percent of the state population of the various age groups, Asians between 0.8 and 1.1 percent, and others between 0.1 and 0.3 percent. There are no data to suggest that the Black and Asian proportions of the various age groups will increase between 1980 and 2000.

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Exhibit 4
Educational Attainment by Race and Spanish Origin of Persons Aged 25 and Over, 1980
—Arizona—

Exhibit 4 shows the proportions of the population aged 25 and over that have completed various levels of education. As the levels of educational attainment rise, the proportions of the population reaching those levels decrease. The differences in attainment among racial and ethnic groups are striking. School attainment of Arizona adults in 1980 does not necessarily reflect what is taking place among the present generation of students in school, but the educational attainment of parents has been shown to affect the educational choices of their children.

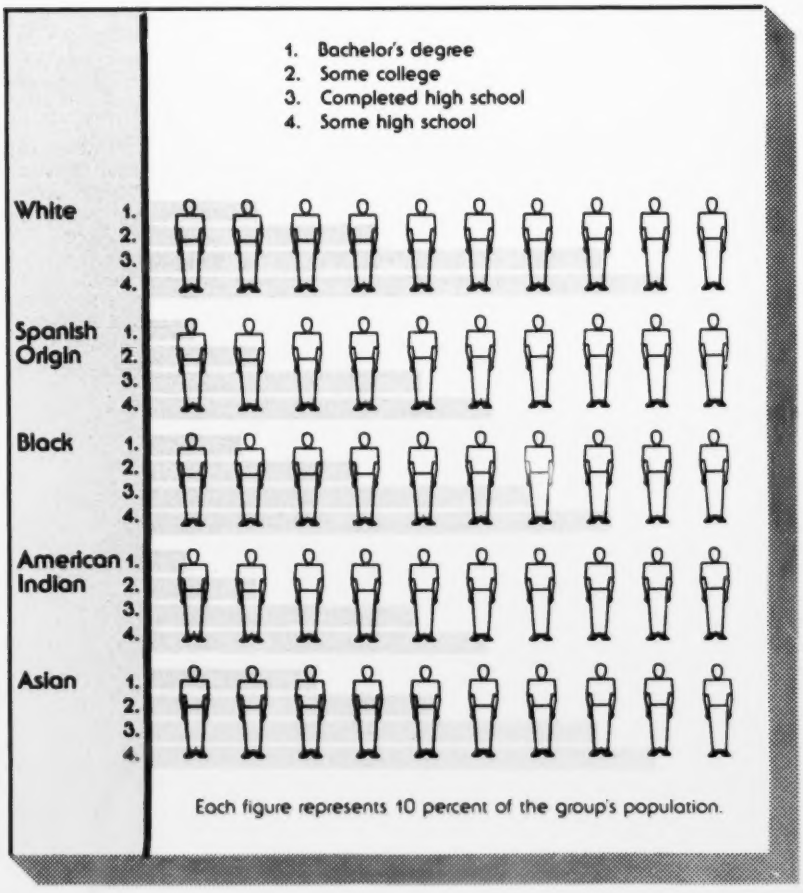
- In 1980, Arizona had the nineteenth highest proportion in the nation (16.8 percent) of college graduates in its population aged 25 or older and the fourteenth highest percentage of high school graduates (72.4 percent) (American Demographics, 1982).

- Only 44 percent and 42 percent respectively of the Spanish-origin and American Indian population aged 25 and over had completed high school in 1980, compared with approximately three-quarters of Whites and Asians and more than 60 percent of the Blacks in the same age group.

- Approximately 40 percent of the White, 32 percent of the Black, and 47 percent of the Asian population had completed some college compared with 18 percent of the Spanish-origin and 17 percent of the American Indian population.

- The disparity in educational attainment is most striking at the bachelor's degree level or higher. For the White population, 19 percent had completed at least the baccalaureate degree, while 28 percent of the Asian population attained that level. Among the Black population, 11 percent had earned a bachelor's degree or more, while 4 percent of the American Indian and 6 percent of the Spanish-origin populations had completed at least a baccalaureate degree.

Exhibit 4
Educational Attainment by Race and Spanish Origin of Persons Aged 25 and Over, 1980
—Arizona—


1. Bachelor's degree
2. Some college
3. Completed high school
4. Some high school
White 1. 2. 3. 4.
Spanish Origin 1. 2. 3. 4.
Black 1. 2. 3. 4.
American Indian 1. 2. 3. 4.
Asian 1. 2. 3. 4.
Each figure represents 10 percent of the group's population.

Source: Kaufman et al., 1983, Table AZ-4

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Exhibit 5
Persistence in High School of Ninth Graders, Fall 1979 to Fall 1982 (Public Schools Only)
—Arizona—

Exhibit 5 presents the percentage of fall 1979 ninth graders in Arizona public schools who were enrolled as tenth graders in fall 1980, eleventh graders in fall 1981, and twelfth graders in fall 1982. While these figures are not identical to rates of persistence for the various racial and ethnic groups through the start of the twelfth grade, they may serve as an indicator or a relative measure of persistence. The numbers of Asian students in Arizona are too small to imply persistence from the data.

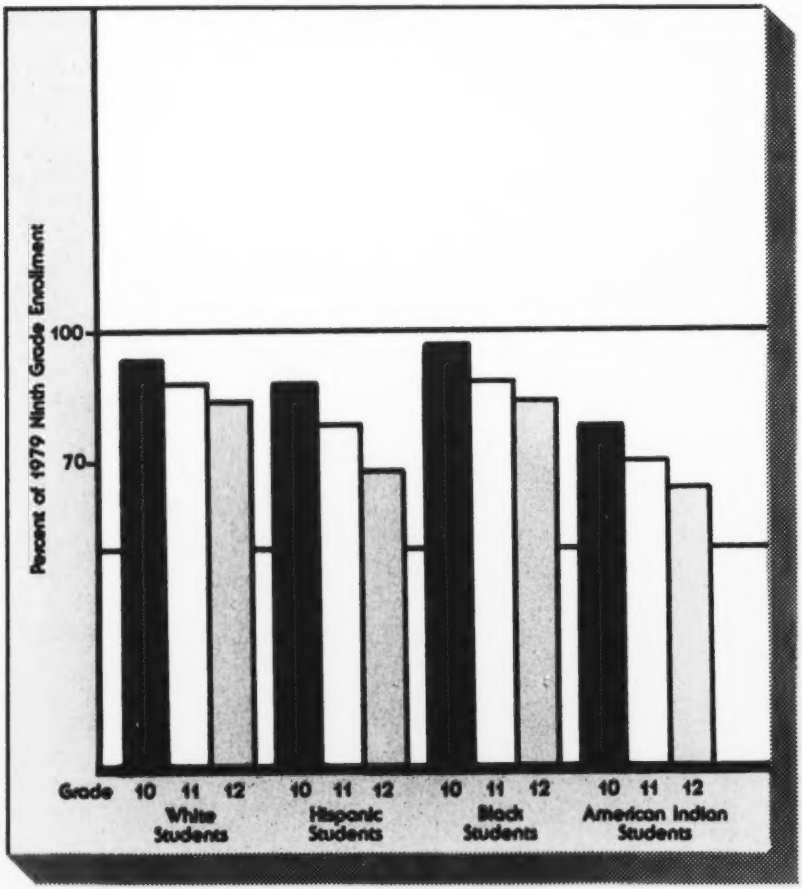
- This exhibit implies that Hispanics and American Indians have higher dropout rates than Whites or Blacks and that these students appear to drop out earlier. While White and Black eleventh graders equaled approximately 89 percent of White and Black ninth grade enrollments two years earlier, Hispanic eleventh graders represented 79 percent of their ninth grade numbers and American Indians 69 percent.

- The number of Hispanic high school seniors in 1982 represented 68 percent of the number of ninth graders three years earlier as opposed to 85 percent for Blacks and Whites. The figure for American Indians is 63 percent.

- Thus, it is clear that a sizeable part of Hispanic and American Indian youth, relative to others, do not complete high school and are thus not likely to enter college.

- In a nationwide study, which shows the "leakage" of minorities from the "educational pipeline," 83 percent of White adult and school-age respondents in the in the Current Population Surveys from 1974 to 1978 completed high school compared with 72 percent for Blacks and 55 percent for Hispanics and American Indians (Astin, 1982).

Exhibit 5
Persistence in High School of Ninth Graders, Fall 1979 to Fall 1982 (Public Schools Only)
—Arizona—



Source: Western Interstate Commission for Higher Education, 1984

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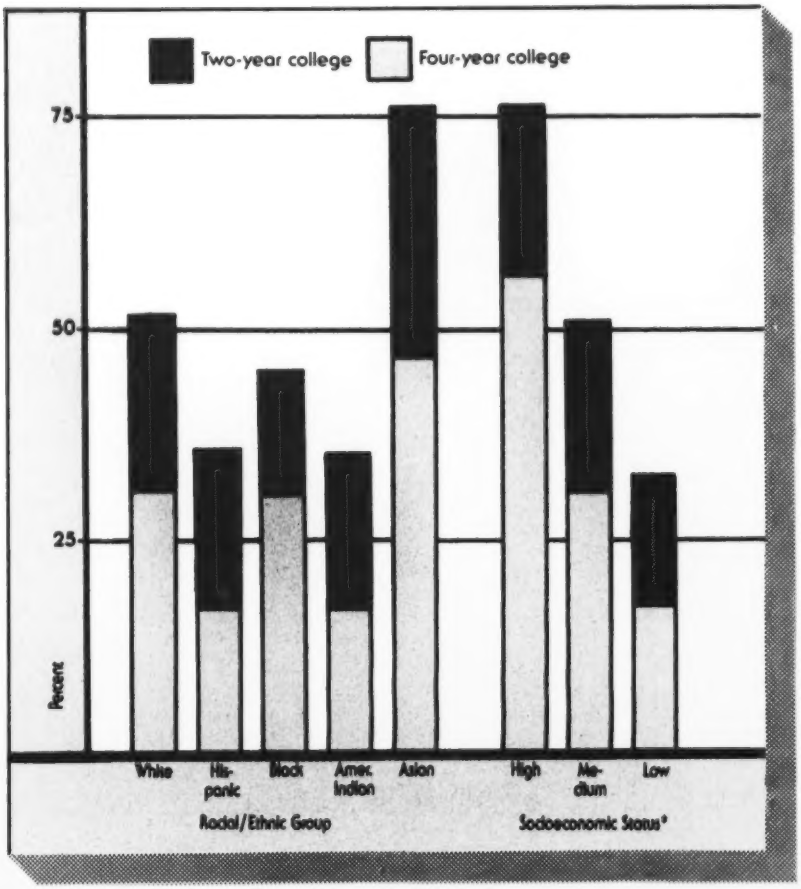
Exhibit 6
Percentage of 1980 U.S. High School Seniors Subsequently Enrolled in College

Taken together, Exhibits 6 and 7 illustrate the relationships among race and/or ethnicity, family income, and college attendance. Exhibit 6 displays the results of a national survey relating to the percentage of 1980 high school graduates who enrolled in college during the next several years (these data were not available on a state-by-state basis). It should be recognized that this was a national survey with limited generalization to the population of specific states. The survey did show that attendance patterns in the West were different from other regions. Although approximately the same percentage of western high school seniors attended college as seniors from other regions of the country, a greater percentage of students from the West attended two-year colleges than students from the other regions (28 percent in the West compared with 14 percent in the Northeast and 16 percent in the North Central states and the South).

- The five bars on the left of the exhibit show the college attendance patterns for the racial and Spanish-origin groups. White and Black students attended four-year institutions in approximately the same proportions, but a greater proportion of Whites than Blacks attended two-year institutions, which accounts for the greater overall college-going rate for Whites. Compared with the other groups, American Indian and Spanish-origin students attended two-year colleges in relatively large proportions and four-year colleges in smaller proportions. Attendance at both two-year and four-year institutions by students of Asian ancestry was far greater than for any other group.

- Attendance patterns vary according to socioeconomic status (SES), which is measured by a composite of parental education, family income, father's occupation, and household characteristics. High SES students are more likely to attend postsecondary educational institutions at all levels than those with lower SES.

Exhibit 6
Percentage of 1980 U.S. High School Seniors Subsequently Enrolled in College



Source: National Center for Education Statistics, 1984

*Socioeconomic status is measured by a composite of parental education, family income, father's occupation, and household characteristics.

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Exhibit 7
Family Income by Race and Spanish Origin, 1979
—Arizona—

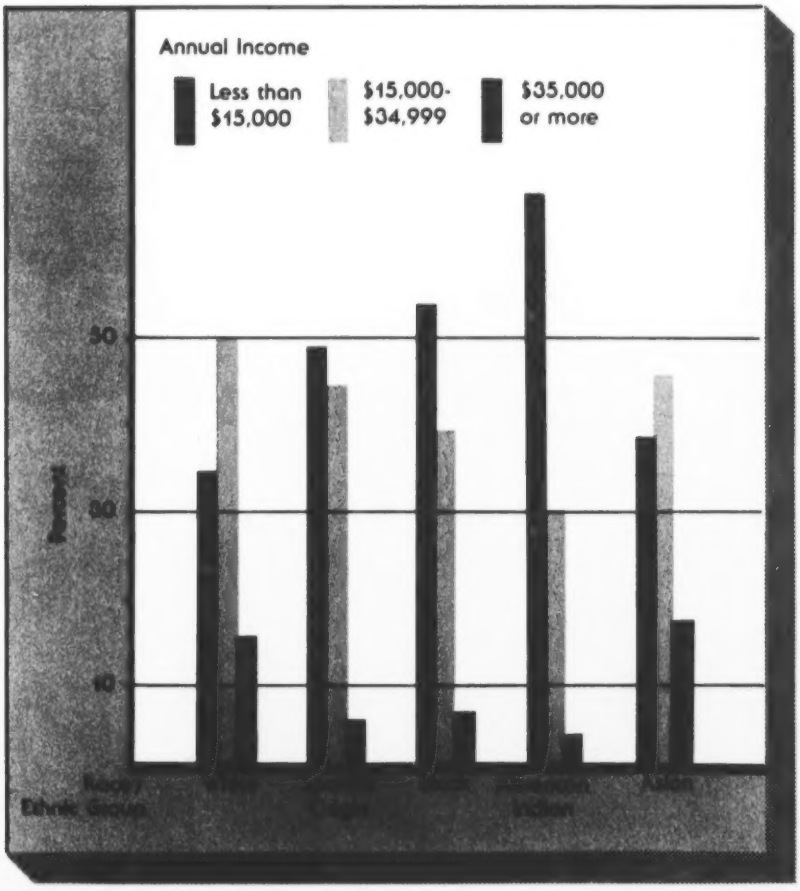
Exhibit 7 shows the percentages of the population with family incomes in three ranges: less than $15,000 per year; $15,000 to $34,999 per year; and $35,000 or more per year. The distribution for each racial or ethnic group is illustrated.

- About 54 percent of the Black, 48 percent of the Spanish-origin, and 66 percent of the American Indian populations come from families earning less than $15,000 per year, while only 4 to 7 percent of those groups come from families earning $35,000 or more.

- Family income levels for the White and Asian populations are similar: compared with the other racial or ethnic groups, relatively low percentages earn less than $15,000 and higher percentages earn more than $35,000.

- These figures, when combined with the general information on student attendance patterns presented in Exhibit 6, demonstrate the important connection between economic status and education.

Exhibit 7
Family Income by Race and Spanish Origin, 1979
—Arizona—



Source: Kaufman et al., 1983, Table AZ-6

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Exhibits 8A-8E
Postsecondary Enrollment
Compared with Representation in the Population, 1980
—Arizona—

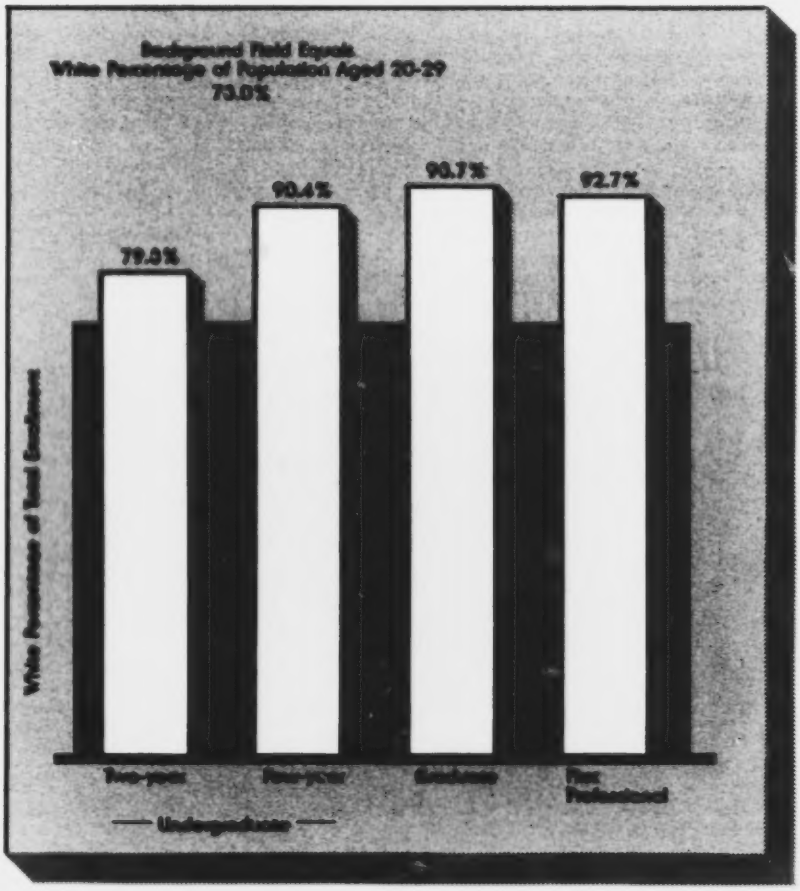
Figures 8A-8E display the composition of postsecondary enrollments by race and ethnicity compared with each group's representation in the college-age population (aged 20-29). Each exhibit uses bars to portray the proportion of one racial or ethnic group enrolled in each of the four levels of postsecondary education. The bars are superimposed upon a background field representing that group's proportion of the college-age population. Thus, the reader can determine whether a group is well represented among postsecondary students in proportion to its representation in the population.

- The White proportion of enrollments at all levels of postsecondary education is greater than the White proportion of the college-age population in general. The White proportion of two-year college enrollment is substantially greater than the White share of the college-age population, and White representation increases at the four-year, graduate, and first professional levels.

- Hispanics are substantially underrepresented at all levels of postsecondary education. Although Blacks and American Indians are well represented at the associate degree level, they are substantially underrepresented at all other levels.

- Asians are well represented at all levels of higher education, particularly at the associate and bachelor's levels.

Exhibit 8A
White Postsecondary Enrollments
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 7 and 22

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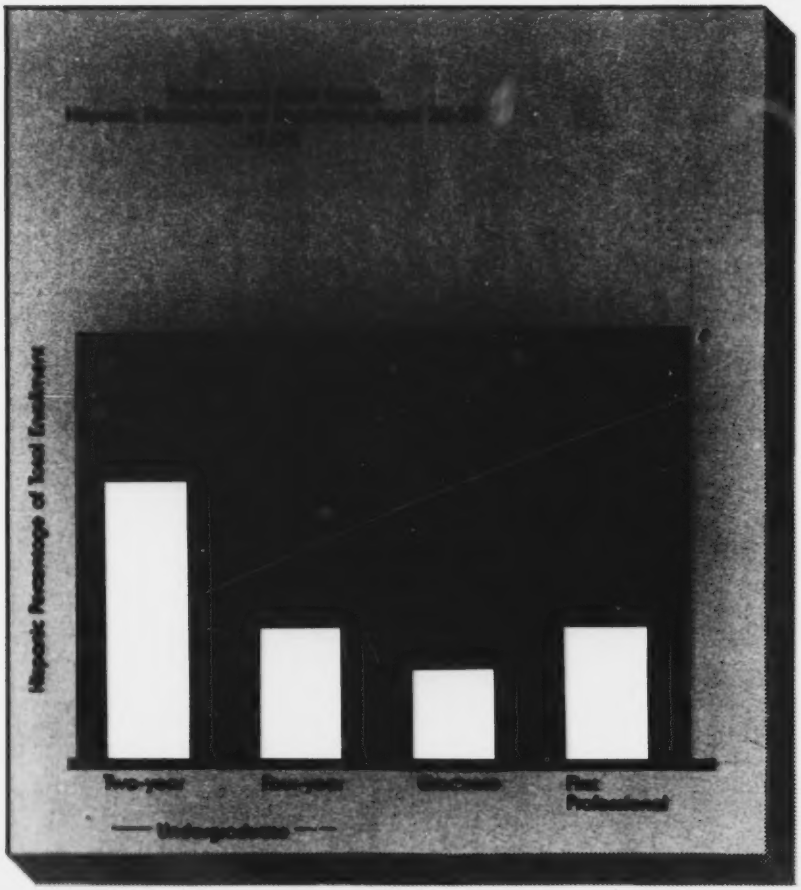
Exhibit 8B
Hispanic Postsecondary Enrollments
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 7 and 22

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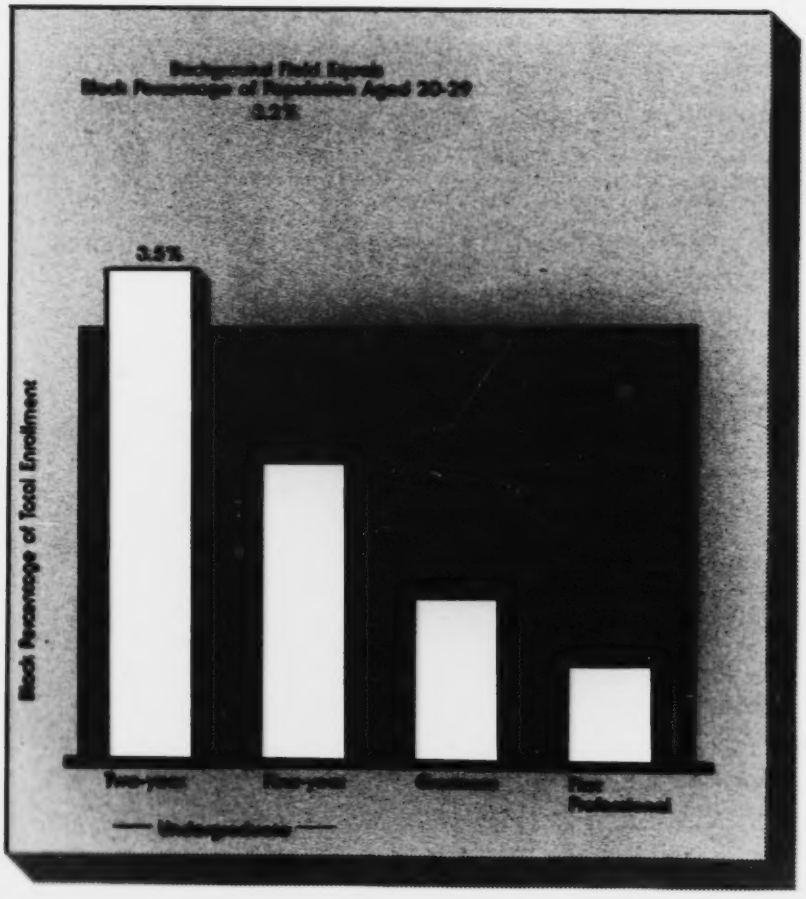
Exhibit 8C
Black Postsecondary Enrollments
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 7 and 22

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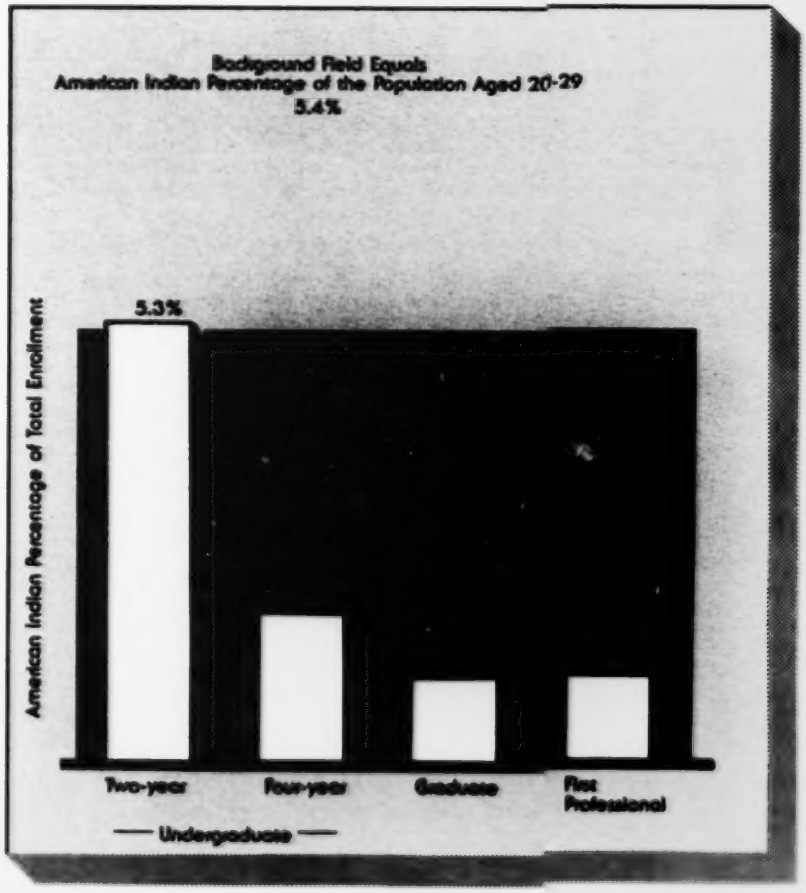
Exhibit 8D
American Indian Postsecondary Enrollments
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 7 and 22

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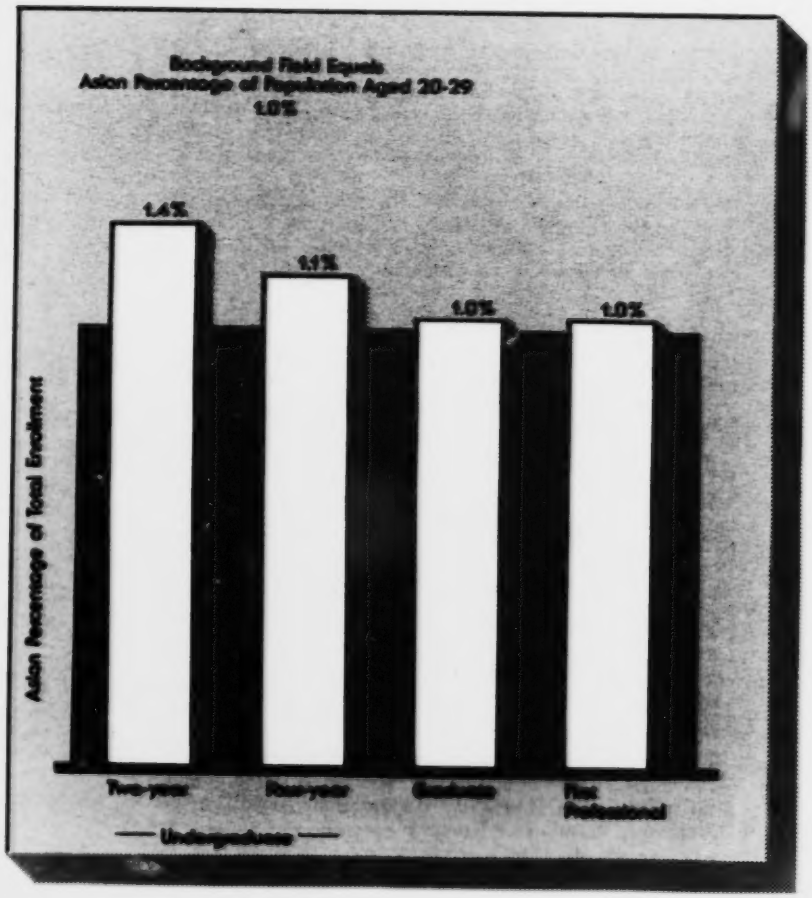
Exhibit 8E
Asian Postsecondary Enrollments
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 7 and 20

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Exhibits 9A-9E
Degrees Earned in Arizona
Compared with Representation in the Population, 1980

Figures 9A-9E display the distribution among racial and ethnic groups of earned degrees at five levels (associate, bachelor's, master's, doctoral, and first professional) with each group's representation in the college-age population (aged 20-29). Each exhibit uses bars to portray the proportion of earned degrees by one racial or ethnic group in each of the five levels of postsecondary education. The bars are superimposed upon a background field representing that group's proportion of the college-age population. Thus, the reader can determine whether a group is well represented in earned degrees in proportion to its representation in the population.

- In general, when the proportions of degrees awarded to members of minority groups are compared with the proportions of college-age population, the overall pattern of underrepresentation of minorities is similar to that in enrollments, especially at the baccalaureate and higher levels.

- The White proportion of those earning degrees at all levels of postsecondary education is substantially greater than the White proportion of the college-age population in general.

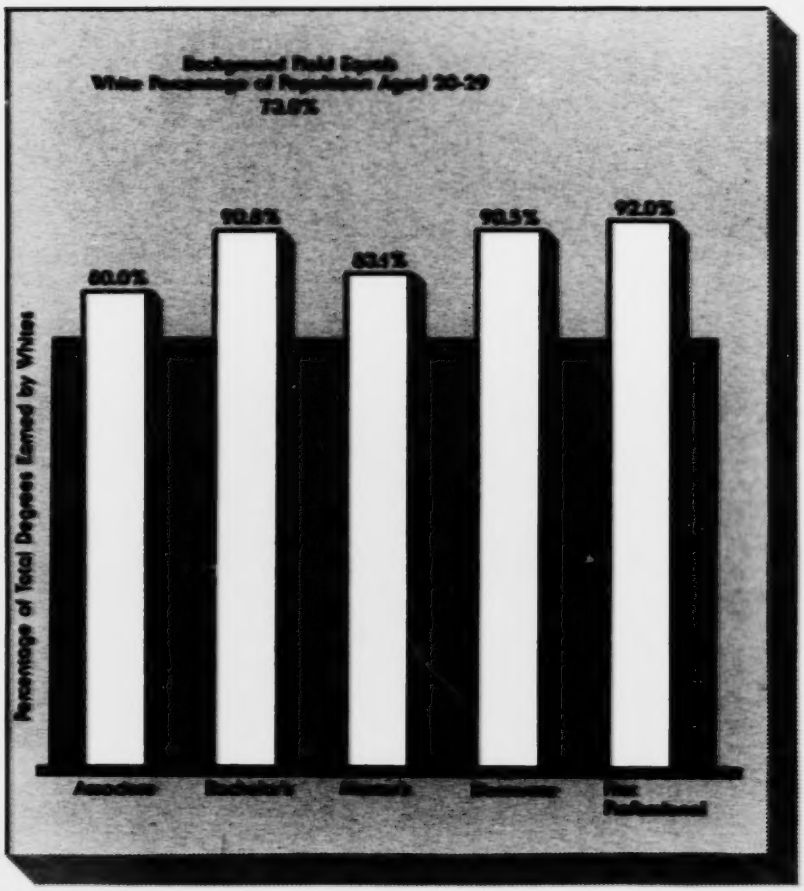
- Hispanics are underrepresented in earned degrees at all levels of postsecondary education. At the associate degree level, the proportion of degrees earned by Hispanic students is two-thirds the size of the Spanish-origin proportion of the college-age population in the state, and at the master's level, the Hispanic proportion is approximately 80 percent. At the other degree levels, the proportions of degrees earned by Hispanic students are approximately one-fourth as large as the Spanish-origin proportion of the college age-population.

- Blacks are also underrepresented at levels beyond the associate degree in Arizona. The Black proportion of associate degrees is larger than the Black proportion of the college-age population in Arizona. At the bachelor's level, the Black proportion is approximately one-half the size of the Black proportion of the state-wide college-age population, 65 percent the size at the master's level, and approximately one-quarter the size at the doctoral and first professional levels.

- American Indians are underrepresented at all levels of postsecondary education, most particularly beyond the associate level. At the bachelor's, master's, and doctoral levels, the American Indian proportion of degrees earned is approximately one-quarter the size of the American Indian proportion of the college-age population in the state, and approximately one-sixth the size at the first professional level.

- Asians are well represented at all degree levels.

Exhibit 9A
Degrees Earned by Whites
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 12 and 22

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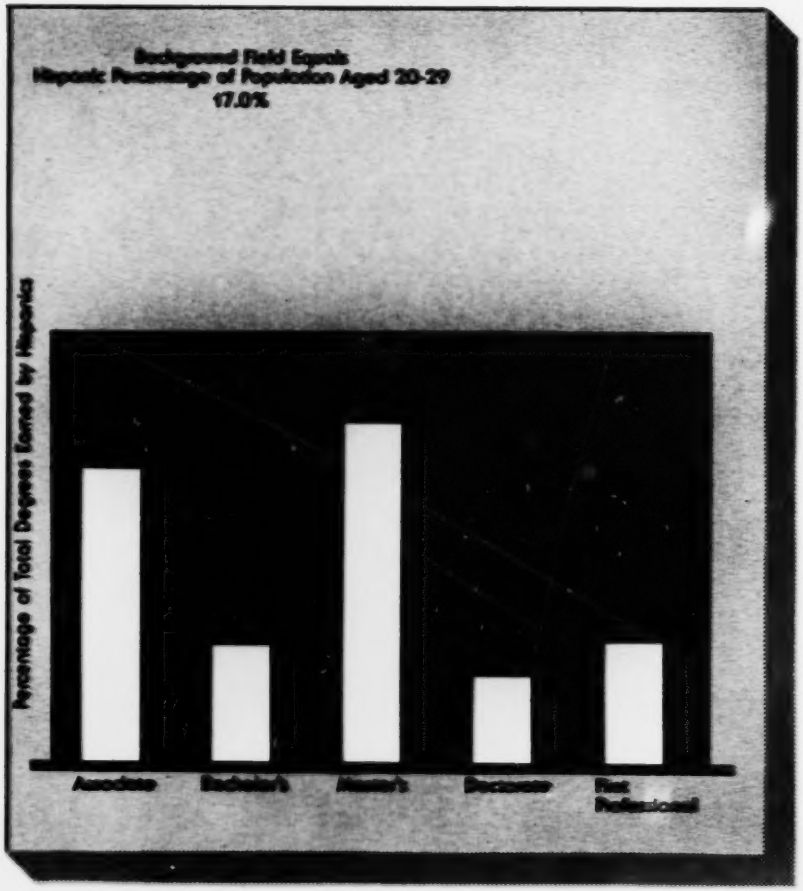
Exhibit 9B
Degrees Earned by Hispanics Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 12 and 22

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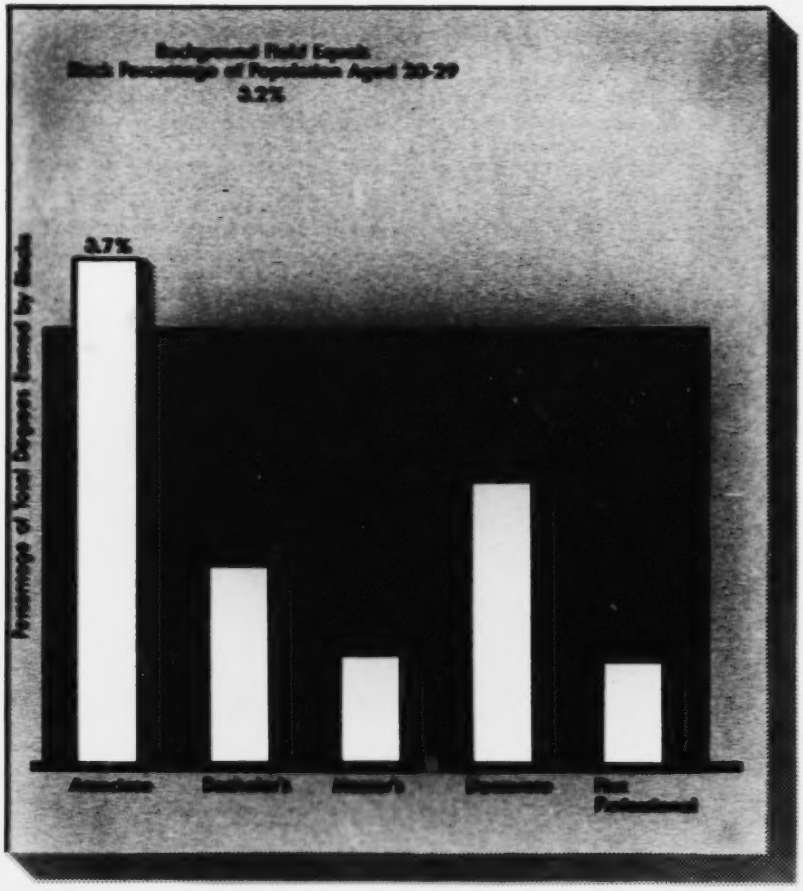
Exhibit 9C
Degrees Earned by Blacks
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 12 and 22

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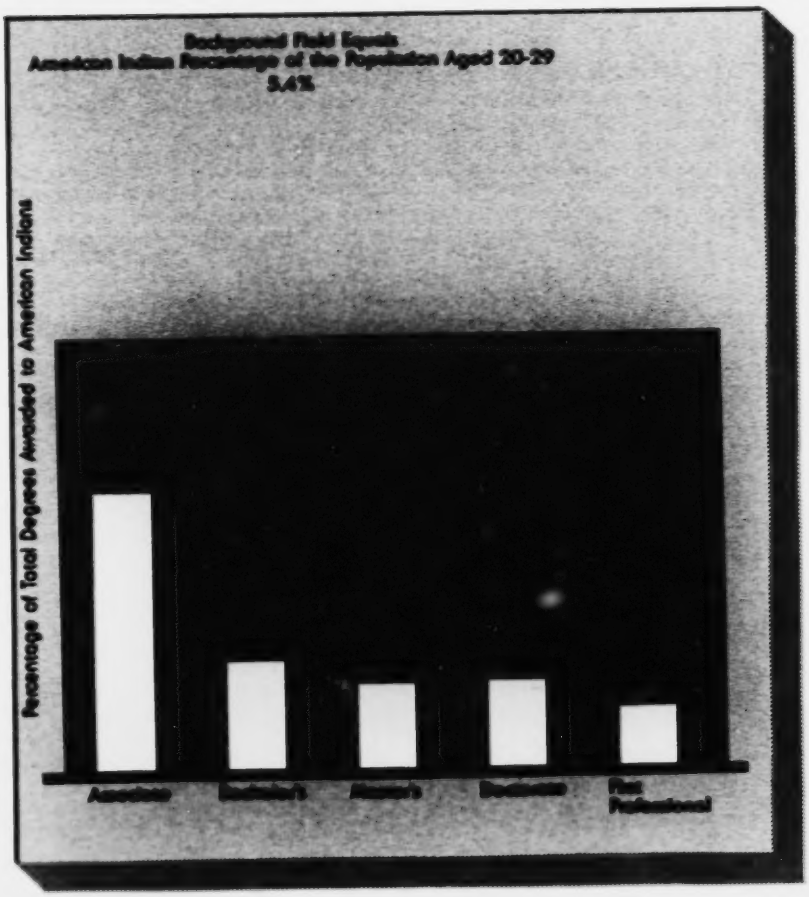
Exhibit 9D
Degrees Earned by American Indians
Compared with Representation in the Population, 1980
—Arizona—


Background Field Equals
American Indian Percentage of the Population Aged 20-29
5.4%
Percentage of Total Degrees Awarded to American Indians

Source: Kaufman et al., 1983. Tables 12 and 22

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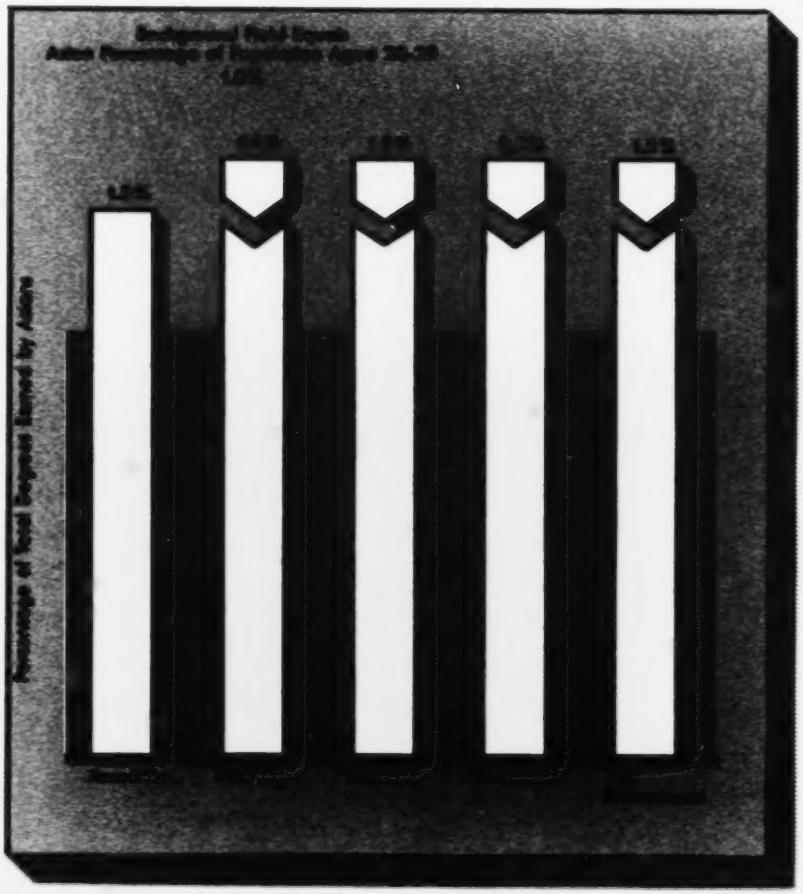
Exhibit 9E
Degrees Earned by Asians
Compared with Representation in the Population, 1980
—Arizona—



Source: Kaufman et al., 1983, Tables 12 and 20

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Exhibit 10
Earned Degrees by Race and Spanish Origin, 1976-77 to 1980-81
—Arizona—

This table presents the number of degrees awarded at five levels (associate, bachelor's, master's, doctoral, and first professional) by racial or ethnic group. At the doctoral and first professional levels, interpretation is difficult because such small numbers of degrees are awarded to minority students that year-to-year fluctuations appear as substantial percentage changes.

- From 1976-77 to 1980-81, there have been substantial increases in the numbers of bachelor's and first professional degrees awarded, nearly 16 and 26 percent increase respectively. At the other levels there have not been dramatic changes over the same period.

- The number of bachelor's degrees earned by Hispanics has increased faster than the overall increase in bachelor's degrees awarded, and there has been a substantial increase at the doctoral level. Slight decreases at the associate and master's levels do not differ dramatically from the overall patterns. At the first professional degree level, the increase in degrees earned by Hispanics is smaller than the overall increase in first professional degrees awarded.

- Black students earned more associate and bachelor's degrees in 1980-81 than in 1976-77 but fewer master's and doctoral degrees.

- American Indians earned substantially more associate degrees, slightly more bachelor's degrees, and slightly fewer master's degrees in 1980-81 than in 1976-77.

- In 1980-81, Asian students earned substantially more associate, bachelor's, and doctoral degrees than they did in 1976-77.

Exhibit 10
Earned Degrees by Race and Spanish Origin, 1976-77 to 1980-81
—Arizona—

	Degrees Awarded 1976-77	Degrees Awarded 1978-79	Percent Change 1976-78	Degrees Awarded 1980-81	Percent Change 1978-80	Percent Change 1976-80
State Totals						
Associate	5,304	5,357	1.0	4,355	-3.3	-0.2
Bachelor's	9,354	9,905	5.9	10,826	9.3	15.7
Master's	4,327	3,940	-8.9	4,350	10.4	6.2
Doctorate	417	392	-6.0	392	0	-6.0
First Professional	319	349	9.4	401	14.9	25.7
White Students						
Associate	4,304	4,273	-0.7	4,078	-4.6	-5.3
Bachelor's	8,530	8,944	4.9	9,610	7.4	12.7
Master's	3,779	3,385	-10.4	3,304	-2.4	-12.6
Doctorate	362	326	-9.9	304	-6.7	-16.0
First Professional	291	332	14.1	369	11.1	26.8
Hispanic Students						
Associate	602	629	4.5	586	-6.8	-2.7
Bachelor's	393	494	25.7	497	0.6	26.5
Master's	140	152	8.6	134	-11.8	-4.3
Doctorate	9	16	77.8	12	-25.0	33.3
First Professional	19	11	-42.1	20	81.8	5.3
Black Students						
Associate	171	177	3.5	189	6.8	10.5
Bachelor's	88	121	37.5	157	29.8	78.4
Master's	49	40	-18.4	32	-20.0	-34.7
Doctorate	12	9	-25.0	7	-22.2	-41.7
First Professional	0	1	N/A	3	200.0	N/A
American Indian Students						
Associate	157	175	11.5	180	2.9	14.6
Bachelor's	137	117	-14.6	149	27.4	8.8
Master's	49	28	-42.9	48	71.4	-2.0
Doctorate	2	2	0	4	100.0	100.0
First Professional	1	0	N/A	3	N/A	200.0
Asian Students						
Associate	57	65	14.0	65	0	14.0
Bachelor's	103	126	22.3	171	35.7	66.0
Master's	56	90	60.7	58	-35.6	3.6
Doctorate	5	7	40.0	9	28.6	80.6
First Professional	6	2	-66.7	6	200.0	0

Source: Office for Civil Rights, 1979 and 1981.

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Western Interstate Commission for Higher Education. 1984. The data upon which Exhibit 5 is based was provided by the Arizona Department of Education in response to a telephone request.